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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,390	07/01/2003	Delin Li	TESSERA 3.0-272	1533
38091	7590	07/12/2004	EXAMINER	
LERNER DAVID, LITENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			TRAN, MAI HUONG C	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/611,390

Applicant(s)

LI, DELIN

Examiner

Mai-Huong Tran

Art Unit

2818

-- Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 25-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restriction

Application's election without traverse of Group I (Claims 1-24) drawn to a semiconductor device is acknowledged for prosecution in the subject application . Accordingly, claims 25-38 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicants have the right to file a divisional application covering the subject matter of the non-elected claims.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 6,673,651 to Ohuchi et al. in view of U.S. Patent Application Publication No. 2003/0153122 to Brooks, in view of Distefano (6,709,895), and further in view of Tan et al. (US 2003/0148597).

Regarding to claim 1, Ohuchi et al. disclose a microelectronic assembly comprising a first microelectronic element 1b having a first face with first contacts 2 exposed at the first face, the first face facing in a first direction; a second microelectronic element 1a having a first side with second contacts 15a exposed at the first side, the first side facing in a second direction opposite to the first direction; a substrate 13 underlying the first microelectronic element 1b and the second microelectronic element 1a, the substrate having first terminals 3b, second terminals 3 and at least one third terminal 3, the first contacts 2 being connected to the first terminals 3b and the second contacts 3 being connected to the second terminals 3 as set forth in col. 4, lines 32-67, cols. 5-6, figs. 6(A), 6(B).

Ohuchi et al. do not disclose a conductive member disposed between the first microelectronic element and the second microelectronic element, the conductive member being connected to at least one of the third terminals. Brooks teaches a conductive member disposed between the first microelectronic element and the second microelectronic element, the conductive member being connected to at least one of the third terminals as set forth on page 3, paragraph [0025].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a conductive member disposed between the first microelectronic element and the second microelectronic element, the conductive member

being connected to at least one of the third terminals, as taught by Brooks in order to improve the manufacturability of the package.

Regarding to claim 2, Ohuchi discloses the assembly wherein the first face of the first microelectronic element faces the substrate and the first side of the second microelectronic element faces away from the substrate (fig. 6B).

Regarding to claim 3, Ohuchi discloses the assembly wherein the second microelectronic element overlies the first microelectronic element (fig. 6B).

Regarding to claim 4, Ohuchi discloses the assembly wherein the substrate has a first surface facing in the first direction and a second surface facing in the second direction (fig. 6B).

Regarding to claim 5, Distefano teaches the assembly wherein the substrate includes first pads exposed at the second surface of the substrate and connected to the first terminals, the first contacts being connected to the first pads (col. 6, lines 35-67, cols. 7-8, and fig. 1).

Regarding to claim 6, Distefano teaches the assembly wherein the first terminals are exposed at the first surface of the substrate.

Regarding to claim 7, Distefano teaches the assembly wherein the first pads are connected to the first contacts by masses of bonding material (cols. 7-8).

Regarding to claim 8, Distefano teaches the assembly further comprising a dielectric material disposed between the first face and the second surface of the substrate, and in-between the masses (cols. 7-8).

Regarding to claim 9, Distefano discloses the assembly further comprising a dielectric material disposed over the substrate, first microelectronic element, and second microelectronic element (cols. 7-8).

Regarding to claim 10, Tan discloses the assembly wherein the first terminals 54 include vias 86 extending through the substrate 44 (page 4, paragraph [0041]).

Regarding to claim 11, Ohuchi discloses the assembly, wherein the substrate includes second pads exposed at the second surface of the substrate and connected to the second terminals, the second contacts of the second microelectronic element being connected to the second pads (fig. 6B).

Regarding to claim 12, Ohuchi discloses the assembly wherein the second contacts and second pads are connected by wires (fig. 6B).

Regarding to claim 13, Ohuchi discloses the assembly wherein the second terminals are exposed at the first surface of the substrate (fig. 6B).

Regarding to claim 14, Tan discloses the assembly wherein the second terminals include vias extending through the substrate.

Regarding to claim 15, Brooks discloses the assembly wherein the first microelectronic element has a second face facing oppositely from the first face and the second microelectronic element has a second side facing oppositely from the first side, the conductive member being disposed between the second face and the second side (page 3, paragraph [0025]).

Regarding to claim 16, Brooks discloses the assembly, wherein the conductive element is adhered to the second face and the second side (page 3, paragraph [0025]).

Allowable Subject Matter


Claims 17-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication on earlier communications from the examiner should be directed to Mai-Huong Tran, (571) 272-1796. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM. The examiner's supervisor, David Nelms can be reached on (571) 272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Mai-Huong Tran


David Nelms
Supervisory Patent Examiner
Technology Center 2800